BIOS

Alberta Society of Professional Biologists • Winter 2008 Volume 23 • Number 4

ASPB 2009 Conference Announcement

April 15 and 16, 2009 the Alberta Society of Professional Biologists (ASPB) presents the 2009 Conference and Annual General Meeting at the Calgary Zoo in Calgary, Alberta.

This year's theme is entitled:

"Keeping Pace with Environmental Policies and Regulations"

Registration information and full details are available at www.aspb.ab.ca.

Logo Design Contest

WIN FREE ADMISSION TO THE 2009 ASPB CONFERENCE

OBJECTIVE: The 2009 ASPB Conference Committee is inviting all ASPB members to submit a logo for our 2009 conference.

GUIDELINES: The logo needs to be original and represent the conference theme. You should include the title of the conference and the text "Alberta Society of Professional Biologists' 2009 Conference". Otherwise, be creative and have fun.

SUBMISSION: Logos need to be submitted by 10:00 pm on January 23, 2009. Your logo can be submitted to pbiol@aspb.ab.ca.

PRIZE: One free registration to the 2009 ASPB Conference and some notoriety.

RULES: The logo must be an original idea and cannot infringe on any copyrights. The logo will become the property of the ASPB.

Any questions or comments may be directed to: eburton@ballastenvironmental.com or lindazim@shaw.ca

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BIOS is published for the enjoyment and benefit of the members of the Alberta Society of Professional Biologists and those interested in the field of professional biology. Articles or comments are welcomed and should be sent to the editor, Linda Zimmerling at lindazim@shaw.ca.

Updates From the ASPB Ethics Committee

by Laurie Hamilton, P Biol

In the Spring 2008 issue of BIOS, the Ethics Update introduced how ASPB has been working hard to identify ethics requirements of ASPB members to keep up with the growing membership and changes within the province and within Canada. Being a member of a professional regulatory organization has many benefits to members as well as the public, as detailed in ASPB's Code of Ethics. We see two types of ethical issues presented to the membership, one being technical (such as those relating to a biologist's technical experience) and one being professional (such as those relating to a biologist's professional status). Both of these types of issues need to be explored to fully understand what ethical issues are facing the membership.

The Ethics Committee is an ad-hoc committee that was formed to identify ethics requirements of the members. The goal of the committee is to understand the ethical challenges faced by ASPB members (a full scope of issues) as an aid to:

- Creation of a workshop as a learning tool, and part of regular upgrading,
- Finalizing the draft Code of Ethics to ensure they reflect members' needs,
- Determining the need amongst members for an advisory committee,
- Identifying clear linkages with the Disciplinary Committee, and
- Continuous evolution of a "professional" society.

At the first meeting, on October 31, 2008, the committee recognized the need for a third party survey amongst the membership, to identify ethical scenarios that they have faced. The results of this survey will be used as a basis for development of an ethics workshop, as well as providing scenarios for publication in BIOS. The anticipated timing of the survey will be from February to March 2009. If you would like to participate in this confidential survey or would like further information, please contact Laurie Hamilton (the committee chair) at laurie@zanshinenvironmental.com.

Once the survey has been completed, an ethics workshop will be created and presented at several hubs in Alberta (the details are still being determined, however the target date for workshop implementation is April 2010). The committee will provide updates on their progress through the BIOS.

...coming soon!

Upcoming Events and Noteworthy News
(conference notices, workshops, news releases)

Articles Worth Sharing
(Article titles with citations that other professional biologists think you should be aware of)

In Your Corner - Ethics Q & A

Feature Biologist Column
(Ngaio Hotte is breaking new ground and will be the first person with a regular column in BIOS presenting interviews with Professional Biologists)

Our Future with the Catch-22 of Water vs Energy

by Robin Leech, P Biol

Biofuels, hydrogen-fuel cells, hybrid and electric vehicles, they give us the warm fuzzies, right? One ad on TV for biofuels went something like this: "I wanna grow my fuel, not pump it out of the ground." Makes you feel downright environmentally green, fuzzy and good inside, right?

Before you go out to buy a vehicle that runs on biofuel, keep in mind that the conversion of agricultural land for biofuels has, for the first time in history, created a direct link between the costs of fuel and the costs of our food, and both are rising alarmingly.

Water is needed to generate energy, and energy is needed to deliver water. Both resources are in limited supply, and both are limiting the other. In the US, a switch from gasoline to electric vehicles or biofuels is a strategic decision that will change dependence on foreign oil to domestic water. This change could be catastrophic.

Plug-in vehicles are very appealing in the US because it is easier to manage the emissions from 1500 power plants than it is from hundreds of millions of exhaust pipes. The infrastructure for support of electric vehicles is in place, but electric power swallows huge quantities of water. Generating electricity for a plug-in hybrid-electric or all-electric vehicle withdraws 10 times as much water and consumes up to three times as much water per mile, according to studies done at the University of Texas at Austin.

Biofuels are worse! Recent analyses indicate that the entire production cycle – from growing irrigated crops on a farm to pumping biofuel into a car – can consume 20 or more times as much water for every mile travelled than does the production of gasoline.

When this is scaled up to the 2.7 trillion miles that US passenger vehicles travel per year, water could well become the limiting factor. Municipalities are already fighting over water supplies with the booming biofuels industry. Recently, citizens of Champaign and Urbana, Illinois, opposed a local ethanol plant's petition to withdraw 2 million gallons of water per day from a local aquifer to produce 100 million gallons of ethanol per year. Resistance will grow even more as rancher's wells run dry. Here are some statistics:

Water Required to Generate 1 Megawatt-hour of Electricity Using:
Gas/steam combined cycle.....7,400-20,000 gallons
Coal and oil.....21000-50,000 gallons
Nuclear.....25,000-60,000 gallons

Water demand for power plants that burn fossil fuels, such as coal-fired plants and nuclear plants, withdraws large amounts of water, mostly from rivers and lakes, altering supply to residents, farms, industry and local environments.

Energy Required to Deliver 1 Million Gallons of Clean Water Using:
Lake or river.....1,400 kilowatt hours
Groundwater.....1,800 kilowatt hours
Wastewater.....2,300-3,300 kilowatt hours
Seawater.....9,780-16,500 kilowatt hours

Power demand for clean water supplied by facilities such as wastewater treatment plants and desalination plants is created using large amounts of energy at great cost.

The dilemma is that alternative-energy-driven vehicles use less petroleum, but producing their fuels or electric energy guzzles more water. The statistics are these:

Gallons of Water Depleted to Travel 100 Miles:
Ethanol vehicle.....130-6,200
Hydrogen fuel-cell vehicle.....42
Plug-in hybrid electric vehicle.....24
Gasoline vehicle.....7-14

So what alternatives do we have, or what changes do we have to make in our life styles?
A) Develop a coordinated energy and water policy.
B) The development and use of innovative technologies can reduce the amount of freshwater that we extract and use. Agriculture is the first place to start with drip irrigation instead of spraying onto fields.
C) Consumption by power plants can be significantly reduced by switching from water cooling to air cooling. Although air systems are more expensive and less efficient during operation, they virtually eliminate water withdrawal.
D) Reusing municipal and industrial wastewaters will save water and reduce energy consumed to transport them.
E) Heat domestic hot water by using solar water heating. It is cheap, reliable time-tested and pays for itself.
F) Make the social choice of giving up corn-based ethanol.

Most importantly, we need to value water. We have to remove the long-standing concept that water should be free or cheap. We are very blasé about wasting water. We need to put a realistic value on it.

Source: Webber ME. 2008. Catch-22: Water vs Energy. Scientific American Earth 3.0. Special Issue Volume 18 (4): 34-41, illustr.

p.s.: Hanneke Brooymans. "Biofuel projects on hold as capital becomes scarce." People with money to invest being very careful about where they use it. Edmonton Journal, 14 December 2008, p.A4 Projects put on hold, others advancing slower than planned, and only one project still operating since the Alberta Government first announced its $239 million bioenergy program in 2006.

Interesting Website

Commit to One Simple Act and do your part to reduce waste, conserve water and reduce energy consumption. http://www.onesimpleact.alberta.ca/

ASPB Salary Survey Results

by Corey De La Mare, P Biol

At long last, the salary survey results have been summarized and are presented below. To our knowledge, this survey is the first of its kind for Alberta biologists. The ASPB developed a voluntary salary survey to collect salary information from the membership. Participants initially submitted salary information in May 2007 and salary data was still received as late as July of 2008. Therefore, it is likely that these salary averages may be 3.5 to 6% below current levels. The salary survey collected information on the following parameters:

- membership status;
- gender;
- education;
- years of experience;
- employment sector; and
- salary.

Participation

In total, 395 ASPB members participated in the survey. All of the numbers and percentages presented below reflect only those members that participated in the survey and do not necessarily reflect the entire membership. The objective of the survey was to illustrate the range of salaries that ASPB members receive as a function of various other factors including employment sector, years of experience and education. It is anticipated that this information could be used to help determine market value for biologists in Alberta, as salary information specific to biologists is, by and large, lacking in Canada.

Of the 395 participants, 312 were Regular members (188 male and 124 female), 82 were Biologists in Training (26 male and 56 female) and one was a Student member. In total, 215 (54.4%) male members participated and 180 (45.6%) female members participated. Approximately half (49.9%) of the respondents had a bachelors degree, 43% had attained a masters degree and 7% had attained a doctorate degree. The level of education was roughly equivalent between genders: 49% of males and 41% of females had a bachelors degree, 42% of males and 44% of females had a masters degree and 9% of males and 5% of females had a doctorate degree. The ASPB has a relatively young membership with over half (52.4%) of the participants having less than 10 years of experience; conversely, 22% of the participants had greater than 20 years of experience.

Nearly 60% (59%) of the participants were employed in the consulting industry, the next largest employment sector of the ASPB was Provincial/Territorial government at 11% followed by the oil and gas industry at 9% and several other employment sectors between four and five percent (i.e., federal government, Non-Government Organization, and industry [other]).

Salary Data

Of the 395 records, 80 were removed from the final data set for calculating average salaries. These 80 records were either missing salary data, or contained data that was hourly or monthly, as a result of contractual rates. Therefore, annual salary could not be directly calculated from these data without making some assumptions that may have influenced the final datasets. However, the records were retained within the overall database for archival purposes.

The salary data could be calculated as a function of any of the parameters, individually or collectively, mentioned above. For simplicity sake, average salary information is presented for the following parameters:

- membership status;
- gender;
- education;
- years of experience and gender; and
- employment sector.

The average annual salary for all biologists in Alberta was $80,210.24, with Regular members averaging $88,300 (Range $24,000–$325,000) and Biologist in Training (BIT) members averaging $49,900 (Range $32,000–$80,000); and males averaging $90,000 (Range $24,000–$325,000) and females averaging $67,300 (Range $34,000–$200,000). However, this gender difference can largely be explained by years of experience as described above under participation. Female members dominate the biologists with less than 10 years of experience, for example, 64% of the 207 members with less than 10 years of experience are female and 74% of participating female biologists have less than 10 years of experience. Conversely, 34% of male biologists have less than 10 years of experience and 33% of male biologists have greater than 20 years of experience.

In terms of education, the average annual salary increased as a function of years of education (Figure 2). Members with a bachelors degree averaged just over $72,000/year (Range $24,000–$325,000), while those with a masters degree averaged over $84,000 per year (Range $45,000–$200,000) and those with a doctorate degree averaged over $110,000/year (Range $48,000–$300,000). The highest average annual salary by employment sector was in the industry sector, second was oil and gas, followed by 'other' industry, municipal government, federal government, and consulting and provincial government (Figure 3).

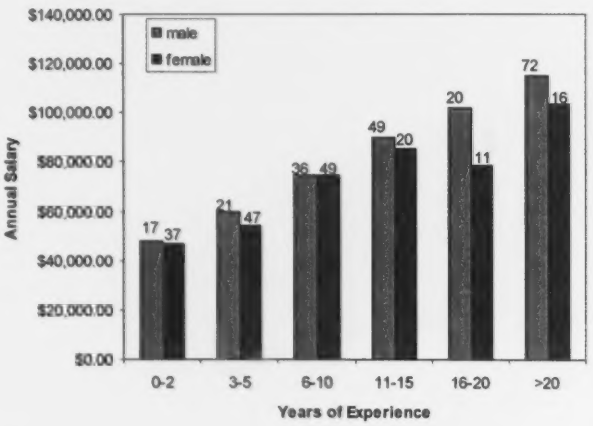

Figure 1 Mean annual salary of ASPB members based on experience and gender.

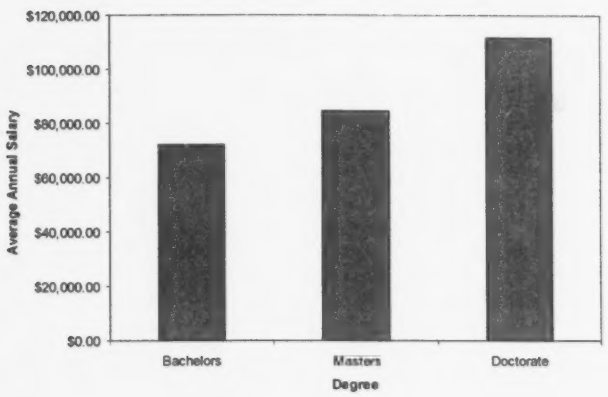

Figure 2 Mean annual salary of ASPB members by degree completed.

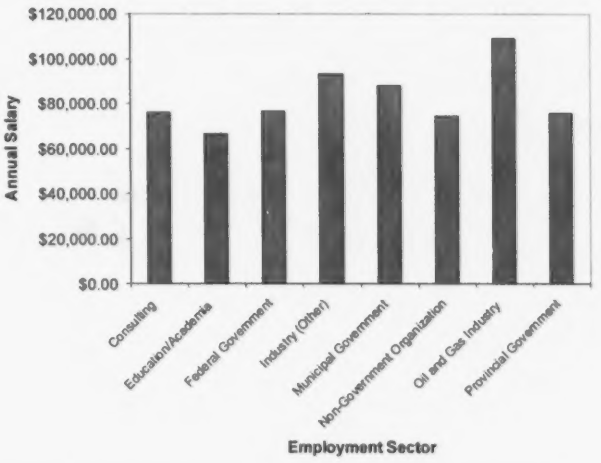

Figure 3 Mean annual salary of ASPB members by employment sector.

Please note: all data from this survey are available on the ASPB website; therefore, any statistics that you are interested in can be calculated by you at your leisure.

Range Health and Ecological Assessment Workshop Summary

by Laurie Hamilton, P Biol

The Range Health and Ecological Assessment workshop was held on September 23 to 25, 2008 and was attended by fifteen members and non-members of ASPB, the majority of which were consultants. Workshop presenters included Barry Adams and Craig DeMaere from Alberta Sustainable Resource Development (ASRD) , Ron McNeil from Landwise Inc. and Marilyn Neville from Gramineae Services Ltd. The program was interesting and informative, the weather was beautiful and the participants were eager, making for an ideal workshop.

The workshop included an evening 'basics' review and two days of practical training in southern Alberta (based out of Lethbridge and Pincher Creek). Topics covered during this workshop included: range site identification, range plant communities, range health indicators and key vegetation indicators applied in reclamation and restoration and MF5 range vegetation sampling forms. Practical range ecology exercises were conducted in the Dry Mixedgrass, Mixedgrass, Foothills Fescue and Montane Natural Subregions.

Farm TV was there to film the participants and interview some of the organizers. Please check out the footage at http://www.farm.tv/videos/originals/aspb-range-health-and-ecology-workshop/. For more information about ASRD's Range Management tools go to their website at http://srd.alberta.ca/lands/managingpublicland/rangemanagement/default.aspx.

Practical lessons were taught in the Montane (and other) Natural Subregions; Credit: L. Hamilton

Soils, terrain and vegetation were the focus of this workshop providing an integrated approach; Credit: L. Hamilton

ASPB Scholarhip History

by Robin Leech, P Biol

How and When It Started

In the academic year of 1981-82, the ASPB established biological sciences scholarships at each of the three universities: the University of Alberta, the University of Calgary and the University of Lethbridge. These scholarships were worth $1500 each, and were awarded to students with top marks.

These scholarships were created 10 years before the Society was registered as a Professional Association by Order in Council on 28 February 1991. They were awarded, at the discretion of each institute, to 4th year undergraduate students with top marks. Sixty-three scholarships had been awarded over the years, including 2002.

A Review of the Records

A casual check of records was made in 2002 to see how many of the scholarship winners had in turn become a P.Biol. We found that only one undergraduate scholarship winner had become a P.Biol., and that most of the winners had gone into medicine and dentistry. With this finding, the Board cancelled the undergraduate scholarships in order to reassess the situation.

A Change of Direction

Late in 2002, the Board awarded a 5-year scholarship worth $8,000/year to the Calgary Zoo. This award tied up $40,000 over five years, leaving insufficient funds for the three universities' scholarships. In early 2003, much of the Board's time was taken up with discussion about the university scholarships, and whether or not we should even re-establish them.

The June 2003 Board meeting was held in Calgary. University scholarships were viewed as the ASPB's pipeline to new members; however, undergraduate scholarships were ineffective at recruiting professional biologists. The focus then shifted to graduate scholarships in biological sciences. Funding sources for these scholarships was elusive, as funds were already committed to the Calgary Zoo. Finally, Robin offered to forego some of his salary in order to fund the graduate scholarships at each university. This funding proposal for graduate scholarships each worth $2500/year for the three universities was put before the Board and accepted. The money ($625/month) is still being provided, or at least will be available, until the Alberta Government matching funds are given to the endowment scholarship funds at each of the three universities.

Reconnecting the Dots

Then came the difficult task of re-establishing the scholarships at each university. It is not just a simple matter of going to the universities with cheques in hand. The source and the offer have to be considered, discussed and approved by several boards within each university. We had dropped the undergraduate scholarships the previous year! We were now interested in graduate scholarships, and were increasing the money from $1500 to $2500. We were successful, and by early 2004, the graduate scholarships were established.

In June 2006, Robin Leech attended the 1st Inaugural Dean's Tea, sponsored by the Dean of Sciences, Dr Greg Taylor, at the University of Alberta. The Tea was being held in honour of those persons, or agency representatives, who had sponsored scholarships in the sciences at the U of A. At the Inaugural Tea, Robin met Emily Lennstrom, the Dean's Assistant. At the 2nd Inaugural Dean's Tea, held in June 2007, Emily Lennstrom arranged a meeting with Robin to discuss scholarships and endowments.

A Growing Investment

At the meeting, Emily asked if the ASPB might be interested in establishing an endowment fund for its scholarship, rather than giving $2500 each year. Emily reported that the Alberta Government had opened a matching grant process for endowments. The minimum input was $25,000 for a total of $50,000 with the matching grant. Robin brought the offer to the Board, and their sentiment is best described in the words of Gerry Haekel, one of the Directors: "This is a no-brainer! Yes, we will go for it." Robin mentioned that we should do the same for the other two universities. After determining the availability of sufficient funds for all three universities, a vote was held, and the endowment funds were agreed to by the Board.

Between the rest of June and August 2007, Robin was successful in establishing endowment scholarship funds at each of the three universities. As the $2500 taken from endowment scholarship funds each year at each institute does not take all the interest money accrued, the endowment funds, and hence the scholarships, will grow.

There have been three recipients of the endowment scholarships since September 2007, two at the U of A (including this year's winner), and one at the U of C. There has not yet been a recipient from the U of L since the endowment scholarships started.

In addition to the endowed scholarships at the three Alberta universities, the ASPB, together with the Association of Professional Biologists of British Columbia, created and now administers the D. Allan Birdsall Scholarship awarded at the University of Alberta to a graduate student in aquatic biology.

2008 ASPB Scholarship Recipient

Congratulations to this year's recipient from the U of A – Rebecca Rooney.
Her topic is the development of a bioassessment tool for evaluating the success of wetland reclamation in the Athabasca Oil Sands region. Stay tuned to BIOS Spring 2009 issue for a detailed article on Rebecca.

Carbon Capture and Storage: A $2 Billion Question

by Ngaio Hotte, P Biol

Debate raged when on July 8, 2008, Premier Ed Stelmach announced that the provincial government would fund $2 billion in Carbon Capture and Storage (CCS) research and technology. Premier Stelmach justified the move by stating that carbon capture and storage has "been identified as being able to make a substantial reduction in global greenhouse gas emissions."[1] The goal is to sequester five million tonnes of CO2 per year by 2015 through investment in development of three CCS projects[2].

In light of recent economic turbulence, Premier Stelmach has come under fire once again over his $2 billion commitment. The province now claims that it has suffered a $6.5 billion loss due to falling commodity prices and will be forced to trim next year's budget. But the Premier has stood by his decision to fund CCS and on Monday, November 24, wrote to the Toronto Star praising CCS as the best way for Canada "to meet its emissions reduction targets."[3] Provincial Energy Minister Mel Knight supported this view, stating that up to 75% of CO2 from oil sands activities can be captured using CCS[4]. Provincial Environment Minister Rob Renner expressed a different perspective on CCS, claiming that the technology will prove more useful for reducing emissions associated with coal-fired power plants[5], a major source of emissions in provinces such as Ontario.

The next day, however, the Canadian Broadcasting Corporation (CBC) obtained a previously undisclosed government document which reports that only a "small percentage" of emissions from Canada's oil sands could be sequestered using the controversial technology[6]. The limitations on GHG emissions reductions from oil sands operations are apparently due to the relative impurity of the emissions stream.

Despite all the controversy, the public at large remains relatively unaware of CCS and has little understanding of the technology and associated challenges. Indeed, aside from budget concerns, CCS has remained below the radar for the public and the media.

So, what exactly is CCS?

To assume the perspective of CCS critics, why should government fund it? Or, to assume the perspective of the Alberta government, why shouldn't government fund it?
Carbon capture and storage (CCS) is a developing technology which is being tested as a means of pumping CO2 deep underground for long-term storage. CCS has been proposed as a key component of the Alberta government's climate change strategy as a mechanism to control greenhouse gas (GHG) emissions associated with oil sands development. Thus far in development, a similar technology has been used to capture and inject CO2 into existing oil wells to increase the amount of recoverable oil – a process called Enhanced Oil Recovery (EOR). However, the feasibility and potential impacts of capturing CO2 and storing it underground in, for example, reservoirs formerly occupied by natural gas or oil, remain unproven.

Hashing out the Issues Around CCS

On November 10, 2008, the Pembina Institute and the University of Calgary Institute for Sustainable Energy, Environment, and Economy (ISEEE) held a thought leaders' forum to discuss key issues surrounding CCS. A broad cross-section of participants included experts from the public and private sectors, academics, private land owners and individuals representing environmental non-governmental organizations (ENGOs). Participants delved into a variety of questions, including:
What are the potential benefits, risks and barriers to development and implementation of CCS in Canada? How should costs and liability associated with development of CCS be distributed between government, industry and tax payers? What are the long-term liability issues, such as monitoring and management of CO2 stores, and who should be responsible? And, at what price per tonne of carbon does this become a cost-effective solution for industry?
Material compiled from the thought leaders' forum is extensive; further information on the forum and the topic of CCS, including papers discussed at the conference, interviews with respected authorities, and external resources can be found online at: http://climate.pembina.org/solutions/ccs.

[1] The Office of Premier Ed Stelmach. July 8, 2008. Speeches: Investments in CCS and Public Transit. http://www.premier.alberta.ca/speeches/speeches-2008-July-8-CCS_Transit.cfm (accessed on November 27, 2008).
[2] Ibid.
[3] CBC News website. November 25, 2008. Alberta reaction mixed to questions about carbon capture technology. http://www.cbc.ca/canada/edmonton/story/2008/11/25/edm-report-reaction.html (accessed November 27, 2008).
[4] Ibid.
[5] Ibid.
[6] Ibid.

Funding Opportunities

Grant Eligible Conservation Fund 2009-2010

The Alberta Conservation Association is proud to enter into its 12th year of Conservation Funding. Up to $1 million will be available for project funding via the Grant Eligible Conservation Fund during the 2009-2010 funding cycle. Applications will be accepted during the month of January 2009.

For the Grant Eligible Conservation Fund Project Submission Guidelines and Application Forms, please see our webpage: WWW.AB-CONSERVATION.COM and follow the link to the GRANTS page. Please read the Project Submission Guidelines carefully, as there are a few changes to the eligibility criteria and funding priorities this year. If you have any questions, feel free to contact Amy MacKinven, amy.mackinven@ab-conservation.com or 1-877-722- 4323

Articles Worth Sharing

Submitted *by Robin Leech, P Biol*

In SCIENTIFIC AMERICAN EARTH 3.0: Solutions for a Sustainable Program:

- Energy vs Water: why both crises must be solved together
- Climate Correction: How much CO2 is too much?
- Biodiversity: the fight over how to save species.
- MisLEEDing?: When green architecture isn't green.
- EcoTourism
- Fuel-Cell Cars
- Dangers from Plastics
- Seed Banks

Submitted *by Ken Kranrod, P Biol*

- In Canadian Society of Environmental Biologists Fall 2008 Vol 65(3) Page 17

Another Bright Idea – Poisonous (mercury) vapours so bad, researchers recommend families no longer use (compact fluorescent lightbulbs) CFLs

Nominations for the 2009 Emerald Awards are now open

Each year, through the Emerald Awards, the Emerald Foundation recognizes leadership in environmental excellence that sets an example for others to follow. Join us in saluting environmental excellence by submitting a nomination. Encourage your friends, colleagues, mentors and youth to submit an award...recognition is just one way to keep the passion and inspiration high.

Visit www.emeraldfoundation.ca for more information.

Stacey Schaub-Szabo, P Biol
Phone: 403-226-4343
Email: schaubszabo@yahoo.ca

Upcoming Events

Jan. 14, 7 pm
Alberta Parks & Protected Areas:
Significantly Small: A Profile of the West Castle Wetlands Ecological Reserve, Presenter: Joey Young, Planning Team Leader, Alberta Parks
The Cochrane RancheHouse (101 RancheHouse Road, Cochrane Located 0.7 km north of the Highway 1A and Highway #22 intersection in Cochrane). Admission: $6/person includes GST. (Space is limited). For more information consult our website at www.fish-creek.org.
For more information or to book your seats in advance, phone (403) 297-7927.

January 16
Prairie Conservation Forum AGM
Okotoks at the Foothills Centennial Centre.

Feb 10 - 12, 2009
We are all Upstream II - North Saskatchewan Watershed Alliance Municipal Forum & State of the BIG watershed release.
Executive Royal Inn, Leduc, Alberta. Hosted by the Partners FOR the Saskatchewan River Basin and the North Saskatchewan River Watershed Alliance this conference will provide an opportunity to learn about the State of the Saskatchewan River Basin, current science and research in the basin, address issues in shared governance, oil and gas, municipal waste water and engaging rural stakeholders in watershed planning. For more information or to register, visit: http://www.saskriverbasin.ca/Upstream2/Home.html.

ARTICLES WANTED

We are always looking for articles to put in the BIOS newsletter. If you have a story or an issue you would like to share with your fellow professionals, please submit it to lindazim@shaw.ca.

Noteworthy News

University of Lethbridge Opens $27 million Water and Environmental Science Research Facility

University of Lethbridge officials, with Government of Alberta representatives and industry partners, celebrated a leadership position in water-related research and education in North America with the official opening of the Alberta Water and Environmental Science Building on 13 November 2008. The 5500 sq. m. (approximately 60,000 sq ft) building will initially house more than 20 researchers and up to 150 supporting technicians, and graduate students, including doctoral candidates, from the Departments of Biological Science, Geography and Physics and Astronomy.
For more information, go to www.uleth.ca

Alberta Birds of Prey Centre – 2008 Newsletter Story

Only 20 years ago the site where the Alberta Birds of Prey Centre resides (two hours south of Calgary in Coaldale, AB) was a marginally productive cultivated field. The site, which was once a prairie wetland, like many marshes, had been drained so the land could be put into agricultural production. To learn more about how the Foundation volunteers, instead of constructing single-purpose rectangular holding ponds, worked with the Town of Coaldale and Alberta Environment to pursue a multi-use environmentally creative solution by building a storm water retention site that included: reclaiming the original native wetland habitat; providing land that would house a birds of prey rescue facility; constructing a new wildlife education facility/tourist attraction, please visit: http://www.burrowingowl.com or read the 2008 Newsletter story (Ab-Birds-of-Prey-Wetlands.Pdf)